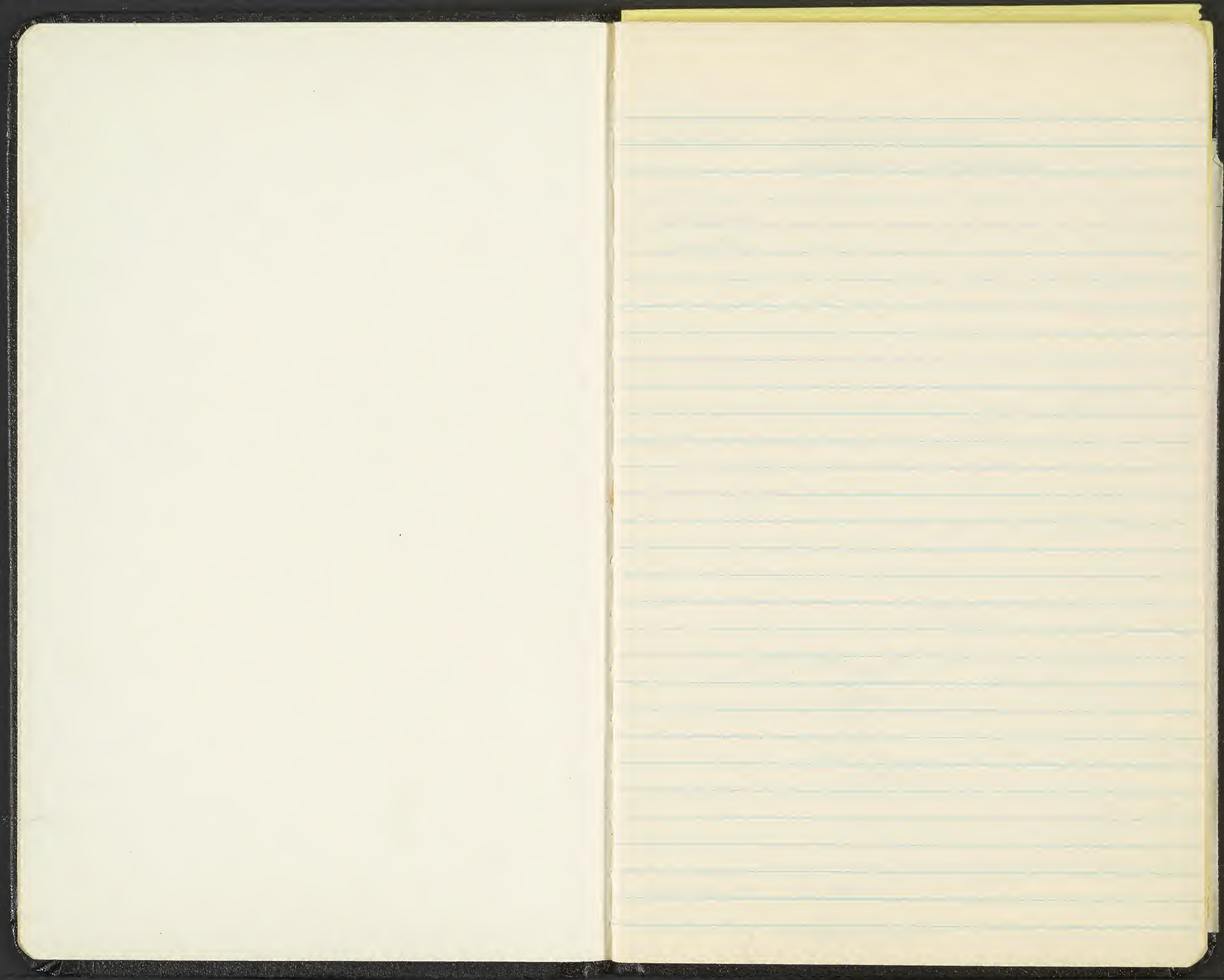


7530-274-5494  
FEDERAL SUPPLY SERVICE





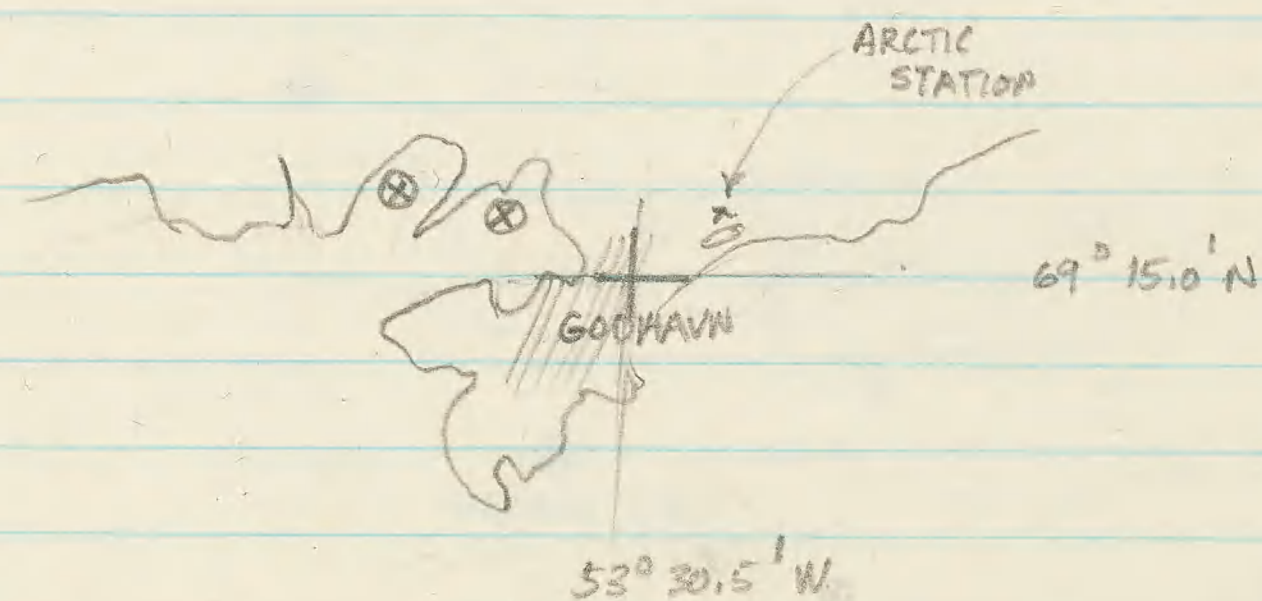
810827/

GODHAVN, GREENLAND

R HIGGINS & R KRISTENSEN

27 SEP 81

810827.1



28 SEP 81

810828.1

X

69° 08.6' N 53° 30.0' W

810903/4

DISKO FJORD, GREENLAND  
R. HIGGINS & R. KRISTENSEN

03 SEP 81

810903.1

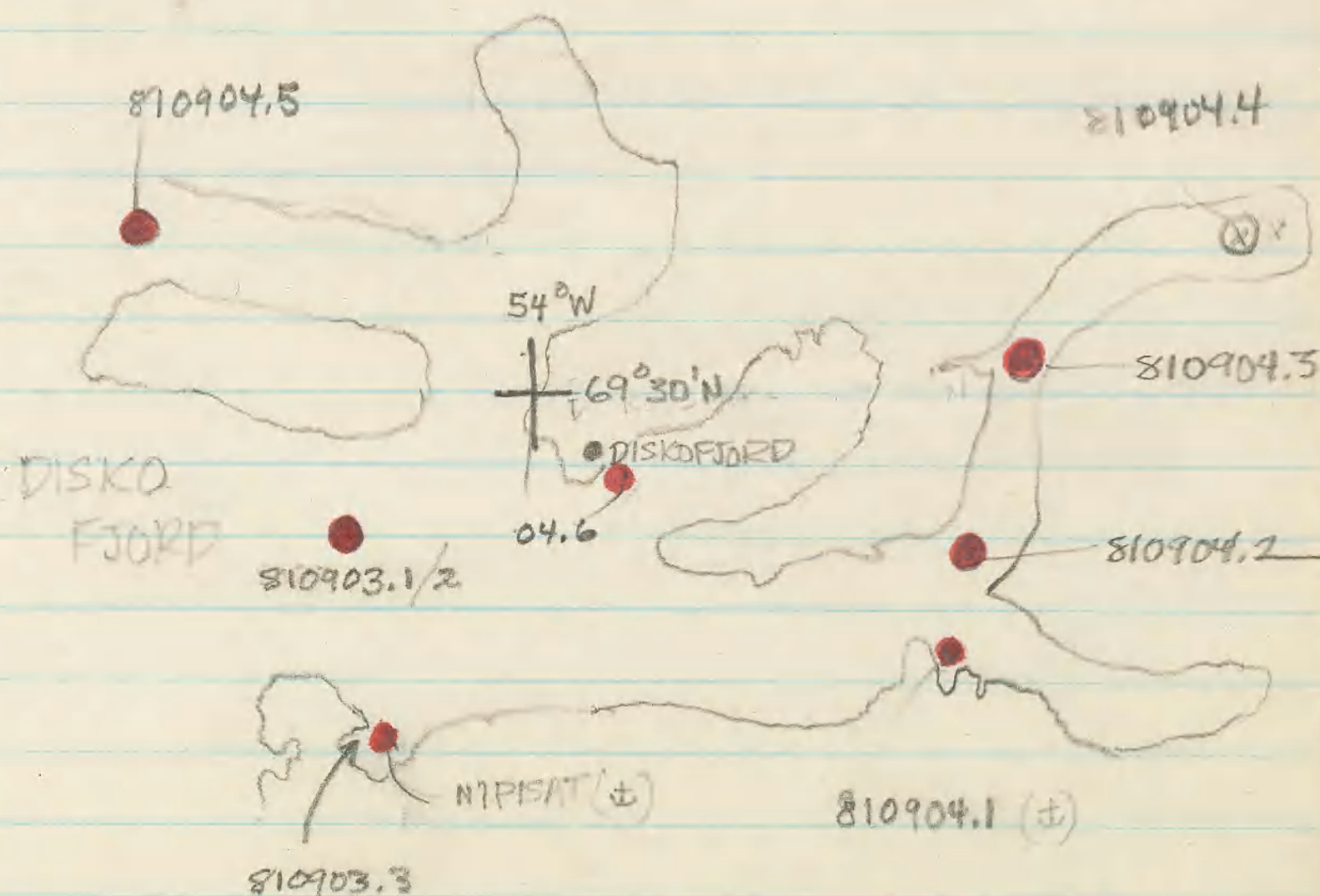
Brk  
recorded as one sample 810903.1 (K)

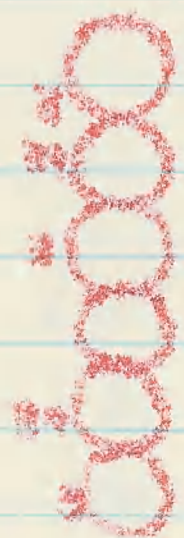
.1 200M 2°C SANDY MUD 2X 0.1M<sup>2</sup> VVG 34‰  
 .2 200M 2°C SANDY MUD HMB 34‰  
 .3 x 1 M 3°C MUDDY SAND + ROCK 0.1M<sup>2</sup> VVG 25‰

04 SEP 81

810904

.1 6.5 M MUD + PEBBLES 34‰ = 3°C  
 .2 140 M SANDY MUD HMB 34‰ 4°C  
 .3 120 M BROWN MUD HMB 34‰ 5°C  
 .4 x 80 M BROWN MUD HMB 34‰ 5°C  
 .5 200 M BROWN MUD HMB 34‰ 5°C  
 .6 9 M MUD + ROCK 0.1M<sup>2</sup> VVG 34‰





810909.1 Tide pool, filamentous algae, near high tide level  
Tardigrade

810909.2 Tide pool, Fucus holdfast  
Isopod

810912.1 66M 0.1M VUC

.2 90M HMD

.3 60M HMD

(.4) 100M HMD

.5 30M HMD

.6 15M HMD

.7 5M 0.1M VUGX

.8 3M 0.1M VUGX

(.9) 225M

No kinorhynchans

No kinorhynchans

Amphipods! No kinorhynchans

Pycnophyes w/ very few Echinoderms

Amphipods, isopods, polychaetes

SKANSEN STATIONS

Echinoderms

Note where amphipods are abundant, samples had kinorhynchans and other fauna except for nematodes & harpacticoids.

SAUDI ARABIA / ARABIAN GULF

Acc. 353876

Keep for K

record but  
give to Reinhardt

81029.1

Saudi Arabian  
Collection

✓ Higgins collection

Aramco

Tetra Tech 30 lbs  
500+

Reinhardt

Hirstensen

has Acc

26°N +  
50°E

Acc. 353878  
(25 vials)

No  
simulink  
Tardigrade  
only

SATT proj see  
mimo  
sheet

Acc. 353877

RPH (Tardigr ?)  
to RMK

Acc. 353877

RPH (RH NOE!)  
w KIND

HALF MOON  
BAY

821029.1 (100 m from shore)  
821029.2 (intertidal beach  
bay side)  
821029.3 (intertidal beach  
ocean side)

SUNSET BEACH

821029.3

821029.1 821029.2

HALF MOON BAY

Saudi Arabian  
Collection

✓ Higgins collection

Arango

Tetra Tech - 20 lots  
500+

Reinhardt

Hristensen

has Acc

Shahar

Saeedi

81029.1

81029.2

81029.3

~~True~~ Apr. 12

Am.

830131.4  
Gino # to 830206.4

Reinhardt ✓

RH 1668

+ Acc #

830201.0

Acc # 348815

SATT - Acc

353878

SAUDI ARABIA / ARABIAN GULF

Keep for K

Acc. 353876

record but  
give to Reinhardt

Acc. 353878  
(25 vials)

No  
analysis  
Tardigrade  
only

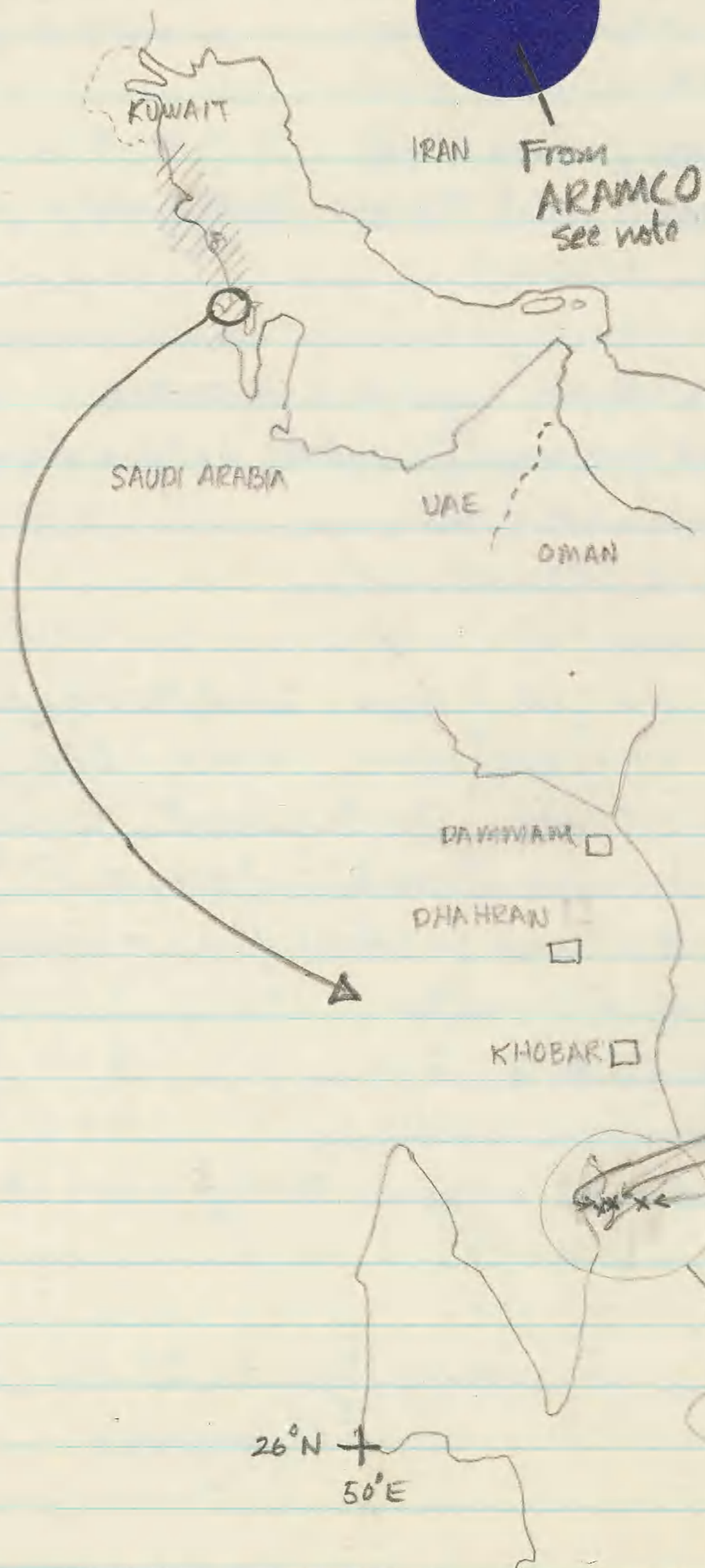
SATT proj see  
minco  
sheet

Acc. 353877

RPH (Tardigr ?)  
to RMK

Acc. 353877

RPH (RH nos!)  
w KING



HALF MOON BAY

821029.1 (100 m from shore)  
821029.2 (intertidal beach  
bay side)  
821029.3 (intertidal beach  
ocean side)

SUNSET BEACH

821029.3

821029.1 821029.2

HALF MOON BAY

29 OCTOBER KHOBAR, SAUDI ARABIA

821029.1 / Half Moon Bay, S of Khobar (100 m off shore) <sup>E of beach</sup>

*what on red*

1 M (at midtide) 81°F 51‰ Fine sand with  
floc on surface

26° 9.9' N 50° 10.1' E

*Echinoderes* (possibly 2 spp)

5% Formalin Col. R. Higgins Benthic seep sampler/  
bubble  
1-5ml(R), 1-50ml(W)

**RH1674**

821029.2 Beach of Half Moon Bay, S of KHOBAR  
Intertidal beach sample (at midtide) 0-0.2 m stratum

fine sand 81°F 51‰

26° 9.9' N 50° 10.1' E

**RH1675**

5% Formalin Col. R. Higgins Shovel/FW wash + decant  
1-50ml(W)

Given to Reinhardt to check for

821029.3 Sunset Beach (E of Half Moon Bay) S. of KHOBAR <sup>Tardigrades</sup>

Intertidal beach sample (at midtide) 0-0.2 M stratum

medium sand 81°F 45‰

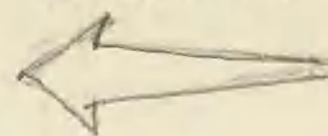
26° 9.9' N 50° 10.1' E

**RH1676**

5% Formalin Col. R. Higgins Shovel/FW wash + decant  
1-50ml(W)

Given to Reinhardt to check  
for Tardigrades

5 4 3 2 1



1 NOVEMBER Previously collected 63µm fractions (See notes enclosed)

STA 7140 31 JUL 82 (5% F/RB) *Tardigrades* (5) *Rotillipis* (5), *Planorbis* (1)

SAFANIA

*Haracticoids* (1-2 spp) (5), *Acarina* (2), *Nematoda* (3)

*Polychaetes* (1)

714B 31 JUL 82 -do-

714A 31 JUL 82 *Harpat* (3) *Nema* (3) *Tard* (1) *Poly* (1)

STA 713A 31 JUL 82 (5% F/RB) *Nematodes* (3) *Harpat* (3) *Acarina* (1)

*Tardigrades* (1) *Rotillipis* (5) *Halechinus* (1) *Polychaetes* (2)

*Turbell* (2)

713B

*Nema* (2) *Poly* (2) *Harpat* (3) *Acarina* (1)

*Tard* (*Halechinus*?) (1) *Turb* (2)

713C

*Nema* (2) *Poly* (2) *Turb* (2)

712A 31 JUL 82 *Nema* (2) *Poly* (2) *Harpat* (1)

712B *Nema* (2) *Poly* (2) *Harpat* (1) *Tard* (1) *Gast* (1)

712C *Nema* (2) *Poly* (2) *Harpat* (2)

711A 31 JUL 82 *nema* (1) *poly* (1) *cope* (1) *turb* (1) *arch* (1)

711B *nema* (1) *poly* (1) *cope* (1) *turb* (1) *arch* (1)

711C -do- + *nemert* (1) *astrea* (1)

2 NOVEMBER RAS AT TANAJIB  
ARAMCO Sidemut Trap station  
821102.1 R ~~Saudi Arabian Tectonic Station 1~~ at Tanajib

**RH1677**

gray clay with some sand

2 or 3 spp Pycnophyes; 1 spm Semnodontes;

1 spm Echinoderm

Note, see juvenile stages noted, many diatoms, some  
copepods, mostly ostracods. In area recently  
dredged through coral reef to create harbor facility

note

821102.2 R -do- Station 4

402

Sand w/ some silt

**RH1678**

Few Echinoderm, Few Pycnophyes, ostracods,  
interesting Charognath, strong turbellarian?

821102.3 R -do-

Station 14?

**RH1679**

Medium sand/shell w/ some silt

Many Pycnophyes (2 spp)

27°50' N

49°58.6' E

6 NOVEMBER ARAMCO (spms received from Linda STANLAND, ARAMCO)

ARAMCO 740729 E1/1A R

29 Jul 74

see note

Echinoderm sp1 (10 spms) (cf E. coulli)

E. sp (1 spm)

Semnodontes? (5 spms)

see ltr from J. Burchard

**RH1672**

730214 D/1  
ARAMCO 740214 D/1 R

see note

Kinorhynchus sp. Juv (1 spm)

14 Feb 1973

**RH1673**

27° 50' N

49' 50.6" E

2 NOVEMBER

RAS AT TANAJIB

821102.1

R

ARAMCO Sediment Trap station

~~Saudi Arabian Technical Station 1~~ at Tanajib

RH1677

gray clay with some sand

2 or 3 spp Pycnophyes; 1 spm Semnodontes;

1 spm Echinodonta

Note, no juvenile stages noted, many diatoms, some copepods, mostly ostracods. In area recently dredged through coral reef to create harbor facility

note

821102.2

R

- do -

Station 4

402

Sand w/ some silt

RH1678

Few Echinodonta, few Pycnophyes, ostracods, interesting chaetognaths, strong turbellarian?

821102.3

R

- do -

Station 14?

RH1679

medium sand/shell w/ some silt

Many Pycnophyes (2 spp)

6 NOVEMBER ARAMCO (spurs received from Linda STANLAND, ARAMCO)

ARAMCO 710729 E2/1A

R

29 Jul 74

see note

Echinodonta sp 1 (10 spms) (cf E. coulli)

E. sp (1 spm)

Semnodontes? (5 spms)

see ltr from J. Burchard

RH1672

730214 D/1

ARAMCO 730214 D/1

R

see note

Kimorhynchus sp. JUV (1 spm)

14 Feb 1973

RH1673

JULY 1 2 3 4 5 6 7 8

7 NOVEMBER Previously collected 63µm fractions

STA (2I4) <sup>A</sup>/<sub>B</sub> (63µm) <sup>w</sup> tard<sup>1</sup> nema<sup>1</sup> poly<sup>1</sup> copa<sup>1</sup> mites<sup>1</sup>  
30 JUL 82 TANAJIB

STA (2I3) <sup>A</sup>/<sub>B</sub> (63µm) <sup>w</sup> tard<sup>1</sup> nema<sup>2</sup> poly<sup>2</sup> copa<sup>3</sup> nemert<sup>2</sup> turb<sup>1</sup>  
30 JUL 82 TANAJIB

STA (2I2) <sup>A</sup>/<sub>B</sub> (63µm) <sup>w</sup> ~~6I1~~ <sup>w</sup> ~~6I2~~ <sup>w</sup> ~~6I3~~ <sup>w</sup> ~~6I4~~ <sup>w</sup>  
30 JUL 82 TANAJIB nema<sup>4</sup> harp<sup>5</sup> poly<sup>2</sup> turb<sup>2</sup> hydrasoa<sup>1</sup>

STA 2I1 <sup>A</sup>/<sub>B</sub> (63µm) <sup>w</sup>  
30 JUL 82 TANAJIB nema<sup>5</sup> turb<sup>4</sup> poly<sup>3</sup> harp<sup>1</sup>

STA 6I4 <sup>A</sup>/<sub>B</sub> (63µm) <sup>w</sup> ~~6I1~~ <sup>w</sup> ~~6I2~~ <sup>w</sup> ~~6I3~~ <sup>w</sup> ~~6I4~~ <sup>w</sup>  
18 MAY 82 TANAJIB nema<sup>1</sup> oligo<sup>1</sup> copa<sup>2</sup> collembola<sup>1</sup> (w/orange floc!)  
tard<sup>1</sup>

STA 6I3 <sup>A</sup>/<sub>B</sub> (63µm) <sup>w</sup> -do- (but w/more fiber)

STA 6I2 <sup>A</sup>/<sub>B</sub> (63µm) <sup>w</sup> -do- (no floc)

STA 6I1 <sup>A</sup>/<sub>B</sub> (63µm) <sup>w</sup> -do- (no floc)

STA 6I4 <sup>A</sup>/<sub>B</sub> (63µm) <sup>w</sup> poly<sup>4</sup> nema<sup>1</sup> tard<sup>1</sup> collemb<sup>1</sup> oligo<sup>3</sup> copa<sup>2</sup>  
31 JUL

6I3 <sup>A</sup>/<sub>B</sub> (63µm) <sup>w</sup>

6I2 <sup>A</sup>/<sub>B</sub> (63µm) <sup>w</sup>

6I1 <sup>A</sup>/<sub>B</sub> (63µm) <sup>w</sup>

NO TIME TO LOOK

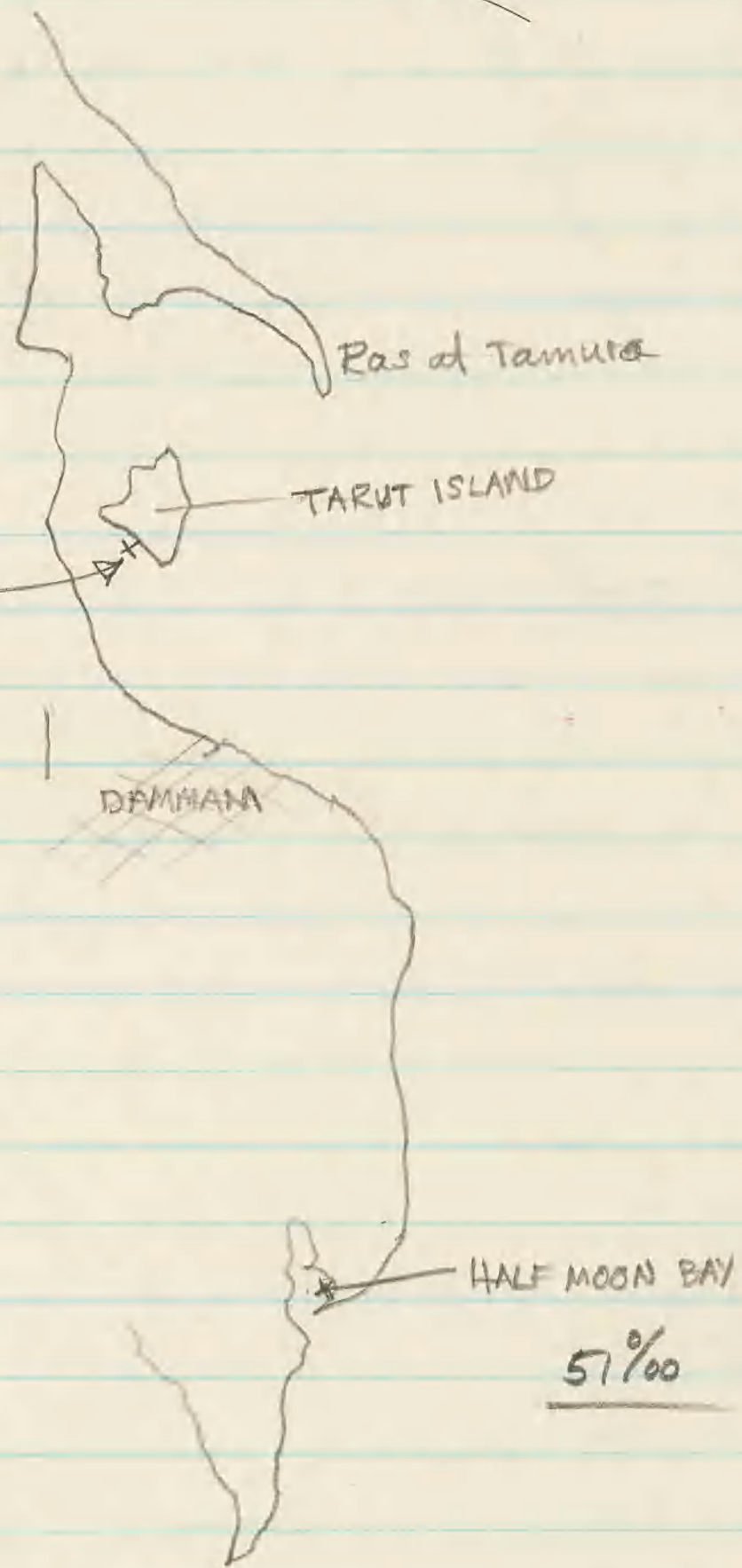
50°E  
+ 27°N

7 NOVEMBER 82

TARUT ISLAND

DISCARDED

collected here  
in intertidal mud  
near mangroves  
- no Kinorhyncha  
or Tardigrada



HALF MOON BAY  
51‰ 27°C  
81°F

1I4 (W)

29 JUL 82

1I3 (W)

1I2 (W)

1I1 (W)

NO TIME TO LOOK

8I4 (W)

31 JUL 82

lard ③

8I3 (W)

8I2 (W)

8I1 (W)

NOTE:

①	T-Shirts	Small	2	Brown w/ yellow	send bill to John for reimbursement
		Medium	12		
		Large	17		
		X Large	3		
			34	X 3rd	

Rec'd 7 Nov \$150

Mail US shirts w/ Xmas card  
"John & Judy"

② Send SI telex number to John McCain

③ Send John info on VIMCO

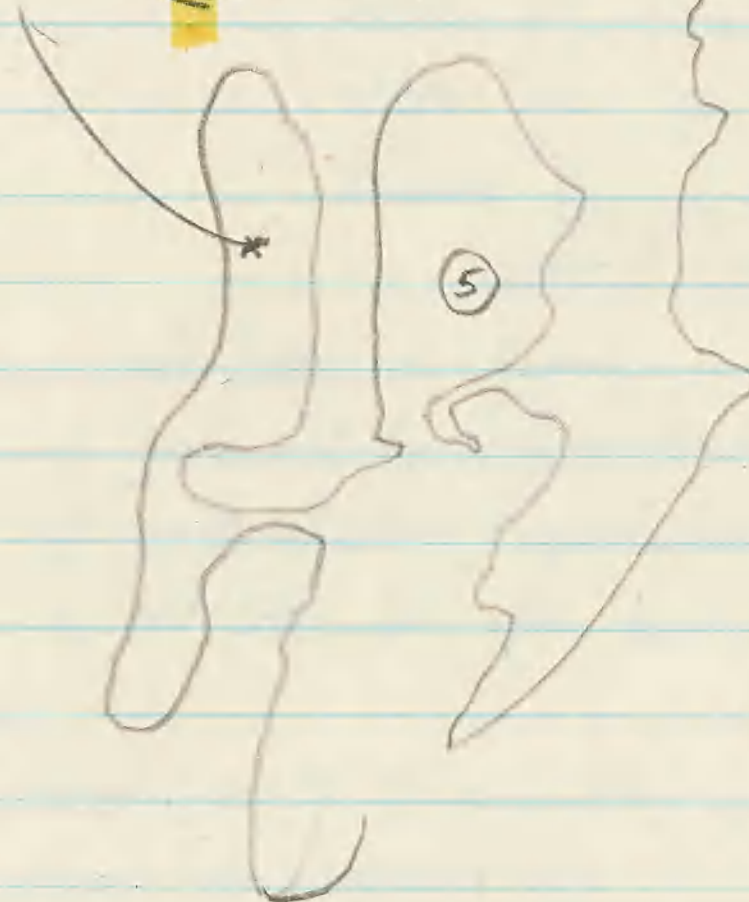
9 NOVEMBER 1982

TANAJIB  
821109.1  
27°47.5' N  
48°48.9' W

**RH 1680**

RAS AT TANAJIB

821109.1

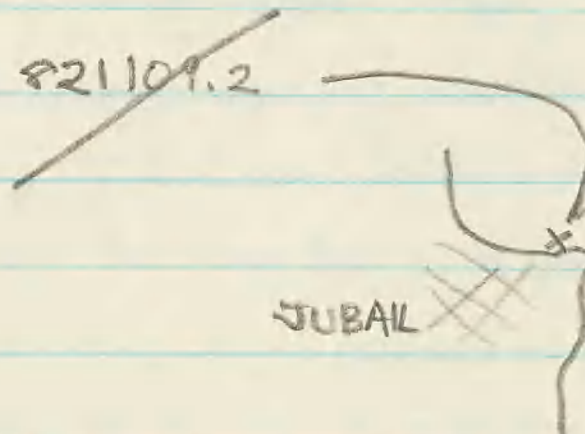


821109.1 shallow embayment  
(hypersaline), ca 1 m depth  
muddy sand 13-35°F  
55-94°F  
35-44‰

Echinoderms Pycnophyes

DISCARDED

821109.2



821109.2 Sand, ca 1-5 m depth,  
near marina at SE corner.

CLEAN SAND

TANAJIB

821109.1

27° 47.5' N

48° 48.9' W

NOTE:

① T-Shirts    small    2  
                 medium    12    Brown w/ yellow  
                 large    17  
                 X large    3  
                 34 x 5 each    send bill to John for reimbursement

Rec'd 7 Nov \$150

Mail US shirts w/ Xmas card  
"John & Judy"

② Send SI telex number to John McCain

③ Send John info on VIMCO

82

RH 1680

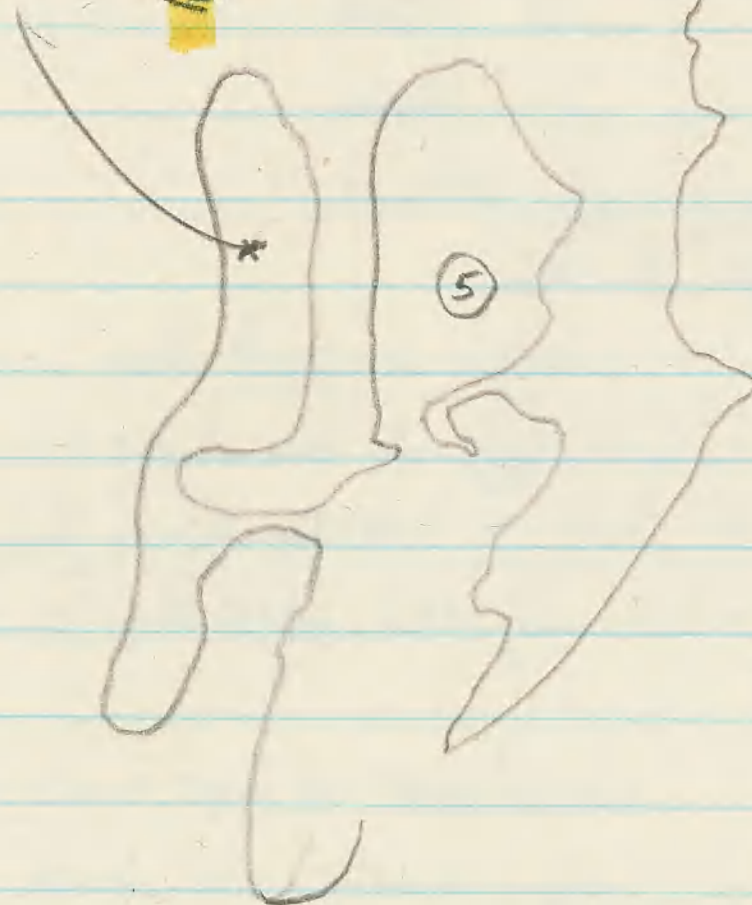
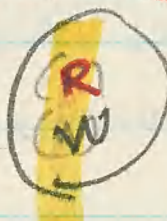
USNM

9 NOVEMBER 1982

**RH 1680**

RAS AT TANAZIB

821109.1

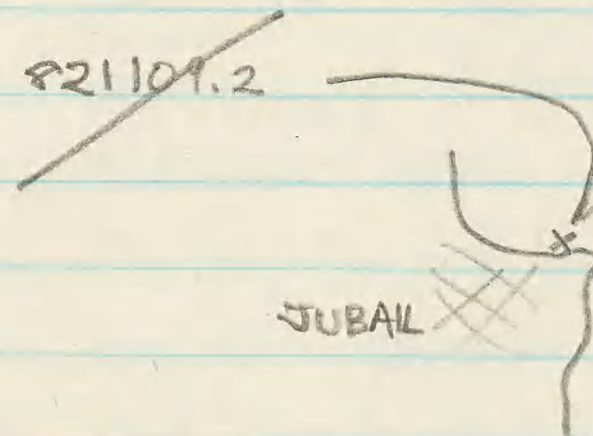


821109.1 shallow embayment  
(hypersaline) ca 1 m depth  
muddy sand    13-35°F  
                         55-94°F  
                         35-44‰

Echinoderm    Pycnophyes

DISCARDED

821109.2



821109.2 Sand, ca 1-5 m depth,  
near marina at SE corner.

CLEAN SAND

1. Mail letters for John PAID
2. Mail letters for Mi
3. Mail large envelope CERT RET REC POSTD PAID
4. Mail pkg for Ralph PAID  
Mail pkg for Judy, FIRST CLASS PAID
5. Order T-shirts
  - a) Send listed shirts to 7 people direct (see list by John)
  - b) INCLUDE Xmas cards "Judy + John McCain" to 7 above PAID

SMALL 2

MED 12

LARGE 17

X-LARGE 3

34 + 2 (one for AI one for RPH) = 36  
Yellow or Brown

rec'd. \$150 in advance

c) send bill for (36) shirts sent to John

d) send all but 7 shirts (above) to John via DHL (see attached)

e) bill John later for balance of shirts + DHL costs

NOTE see item 17 \*

6. Send John SI Telex number
7. Send John VIMCO info
8. Send Burchard copy of BM(NH) NERC report on systematics
9. Send John copy also
10. Give copy of intertidal data to Duane Hooper + DHL address
11. Send John "FRANKS CONV TO GBL"
12. For Mary Rice - Do you want Spunculars?
13. For AI - Ghazlan 26°40'N 150°E
14. Send "How to collect Kuerlygnel" to Linda eld/J. Burchard + to Ralph
15. Ref from John SR 820 for hotel, tips, taxi + 152 hrs @ \$1/hr = \$152  
for turn over to res. fund.

16. For Ralph 2 Large  
1 med  
2 small  
(5) PAID

Send to Ralph Hawn  
308 Kihapai St  
Kailua, HI 96734 ✓  
(808) 261-6013

17. For Mic 9 large } send to Mic Griben  
Whetstone Rd  
Harwinton CT 06991 ✓  
2 med  
(11) PAID  
(203) 485-1448

\* → + 1 large } incl. w/ shipment to John via DHL  
(12) PAID  
~~12~~ PAID by Ralph

# TOTAL T-SHIRT ORDER

	JOHN	RALPH	MIC	BOB	AL	BOB XTRA	A XTRA	
SMALL	(2)	(2)						4
+ 3 MED	(12)	(1)	(2)				1	16 + 5
+ 3 LARGE	(17) 18	(2)	(10)	(1)		(3)		34 + 3
X-LARGE	(3)				(1)		2	= 6
PAID FOR →	34	5	12	1	1	3	3	
+ 6	(35)							

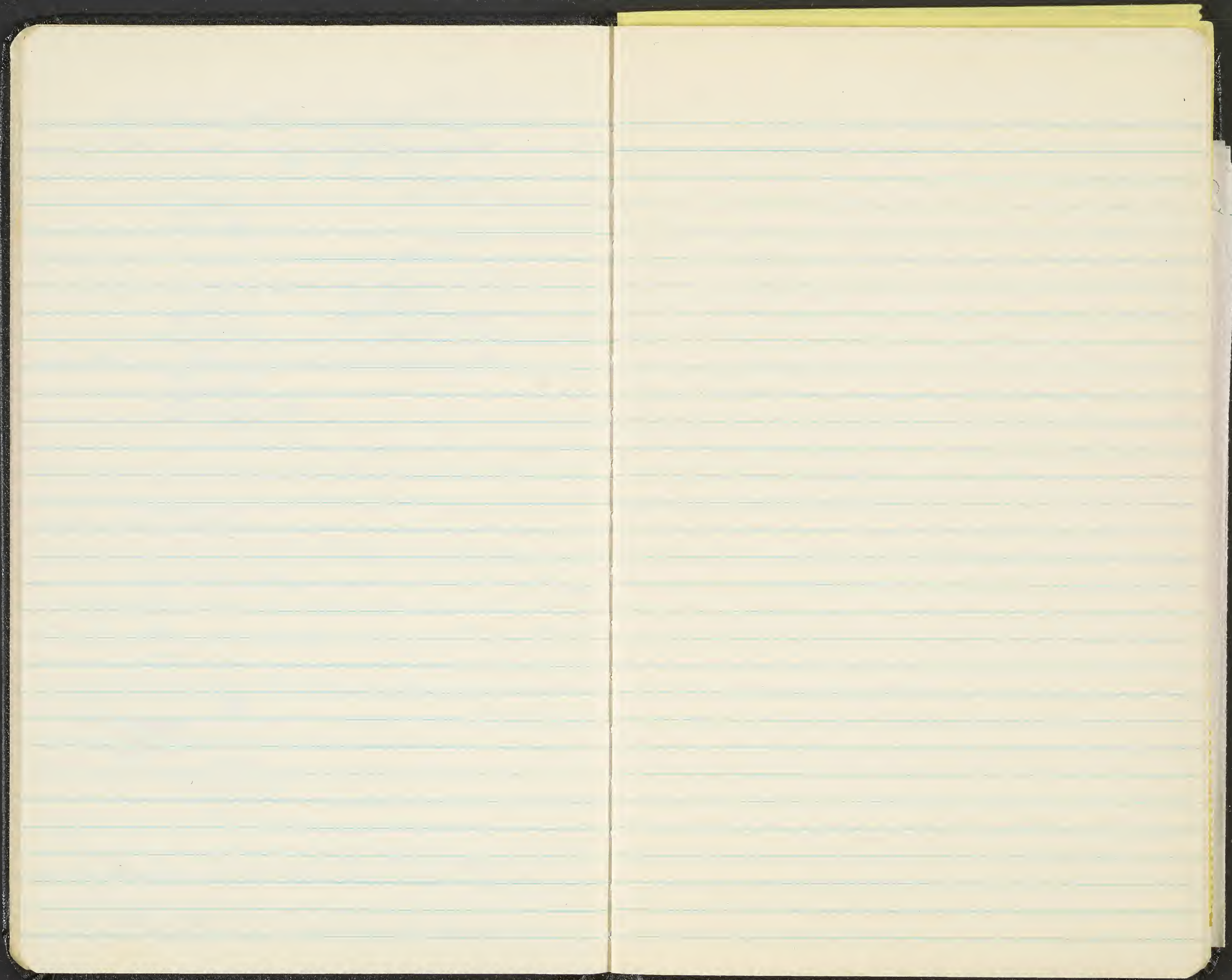
(40) total  
\$150 need

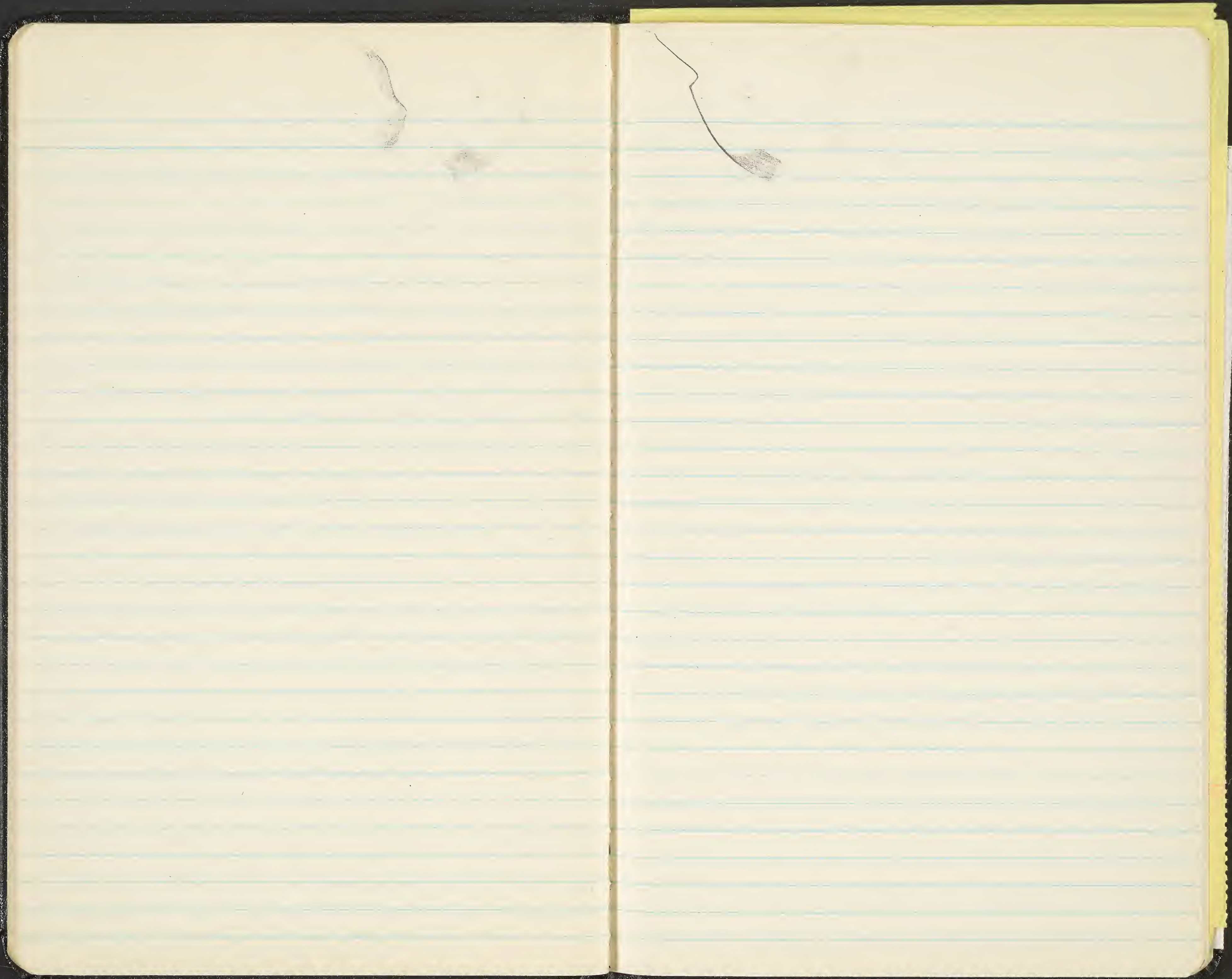
add one large  
for Hassan via John  
paid by Ralph

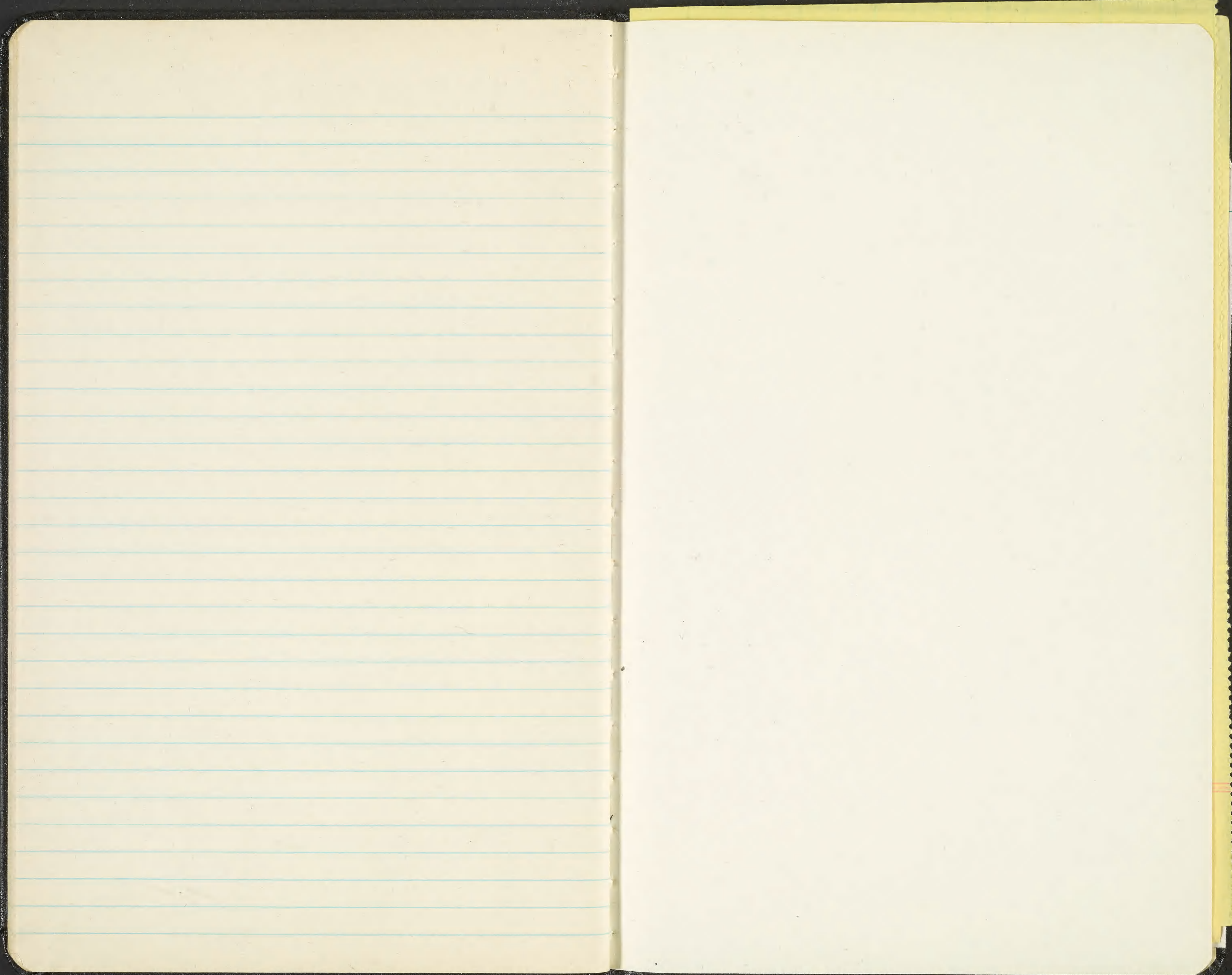
20. Get film (prints) developed (PAID) & send to Mic's address in CT.

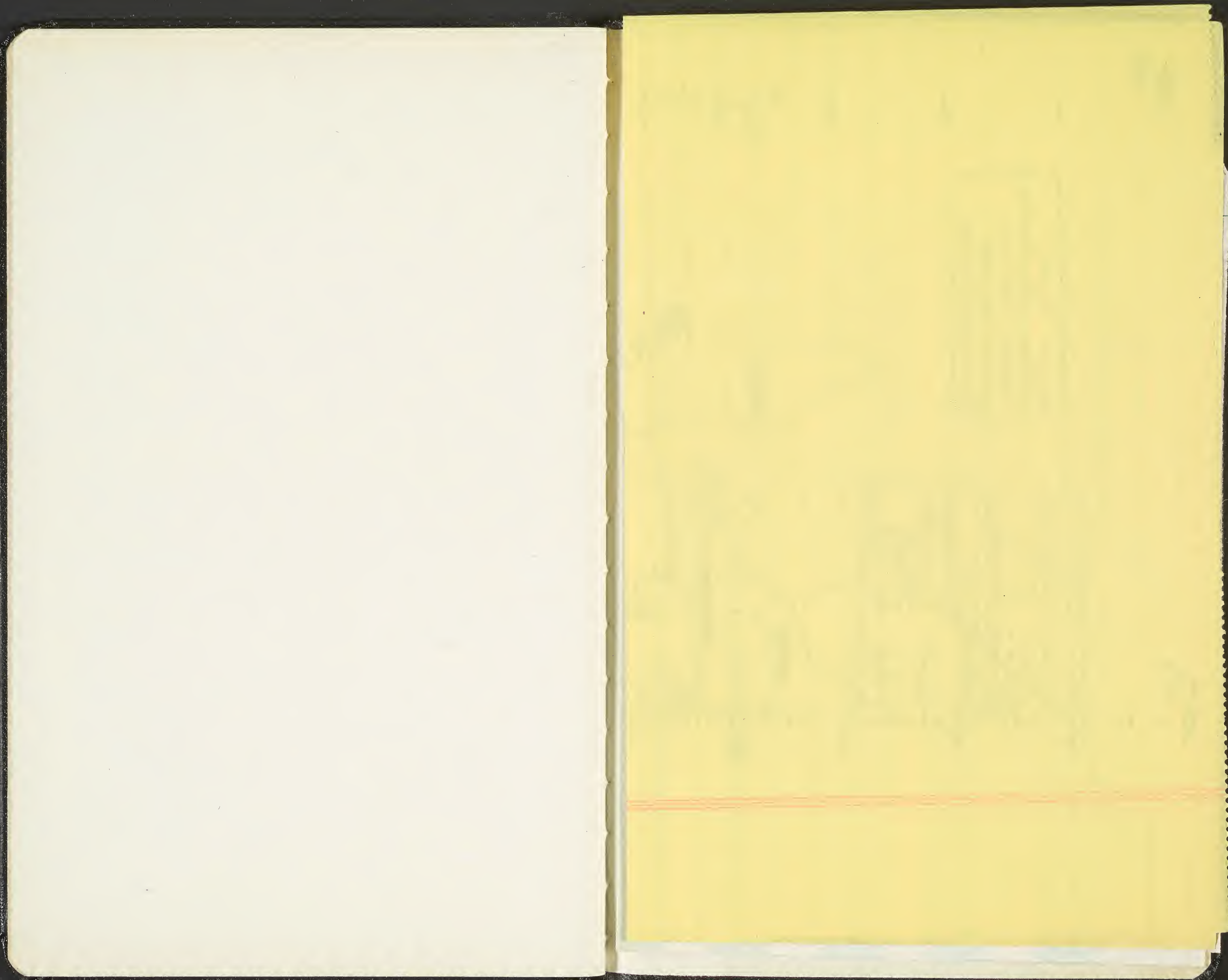
18. Make knowledge print for Ralph also menleuthic bridge plans

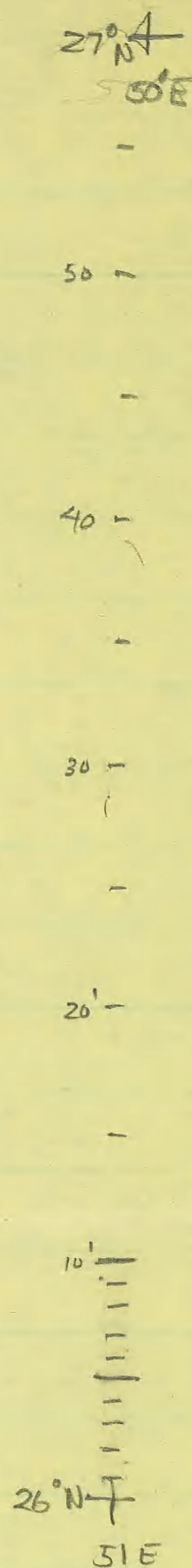
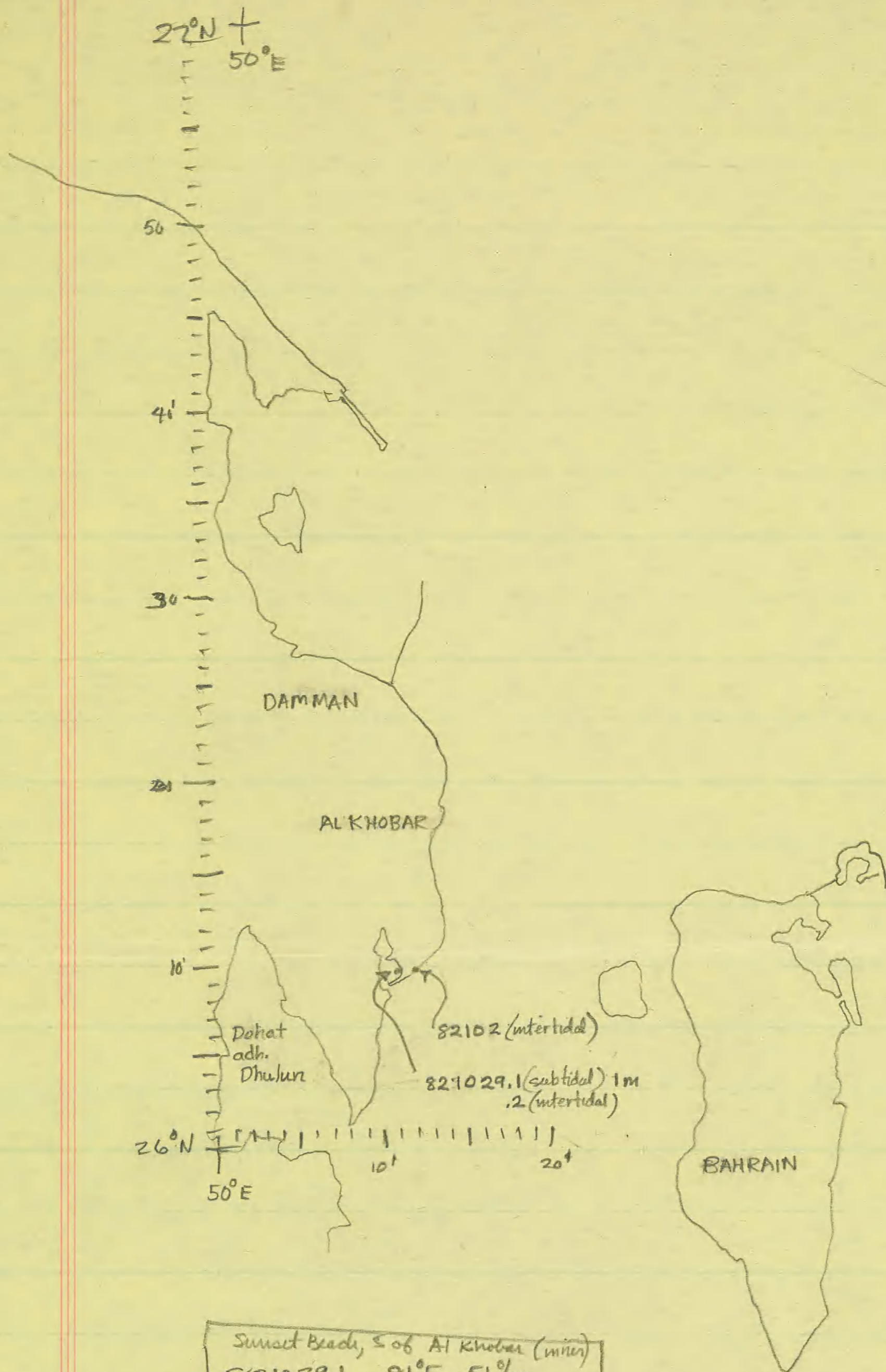
19. Make photocopy (for framing) T-shirt design for Ralph John & Mic











Sunset Beach, S of Al Khobar (inner)  
 821029.1 81°F 51‰  
 fine sand w/  
 surface flocc.  
 in 5% formalin 1. M at mid tide  
 2 sps Echinoderes  
 26°9.9'N 50°10.1'E

Sunset Beach S of Al Khobar  
 821029.2 81°F 51‰  
 intertidal fine sand  
 in 5% formalin - 0-0.3 M in beach  
 26°9.9'N 50°10.0'E

Sunset Beach S of Al Khobar  
 821029.3 80° 41‰  
 intertidal medium sand  
 in 5% formalin - 0-0.3 M in beach  
 26°9.9'N 50°10.1'E

EMPLOYEE	SIZE	PERMANENT ADDRESS
STEPHEN L. COLES	LARGE	HAWAIIAN ELECTRIC CO. ENVIRONMENTAL DEPARTMENT P.O. BOX 2750 HONOLULU, HAWAII 96840
THOMAS M. GRIEB	X-LARGE	6438 ASCOT DRIVE OAKLAND, CALIFORNIA 94611
ROBERT M. HANSEN	LARGE	3026 CIELO PL. CARLSBAD, CALIFORNIA 92008
ATSUHIRO KUBO	MEDIUM	2426 E NEW YORK DR. ALTADENA, CALIFORNIA 91001
CLARK LEWIS	LARGE	98-1694C KAAHUMANU ST. PEARL CITY, HAWAII 96782
DAVID PATTERSON	LARGE	TETRA TECH, INC. 630 NORTH ROSEMEAD BLVD. PASADENA, CA 91107
THOMAS R. SOPER	LARGE	TETRA TECH, INC. 630 NORTH ROSEMEAD BLVD. PASADENA, CA 91107

Christmas Cards - From  
John & Judy McCain

ADD 2 more med. to your list

